Title (en)

METHOD FOR CONNECTING A TUBULAR CABLE LUG TO A STRAND PRODUCED FROM ALUMINIUM

Title (de)

VERFAHREN ZUM VERBINDEN EINES ROHRKABELSCHUHS MIT EINER AUS ALUMINIUM HERGESTELLTEN LITZE

Title (fr)

PROCÉDÉ DE RACCORDEMENT D'UNE COSSE DE CÂBLE TUBULAIRE À UN CONDUCTEUR MULTIBRINS EN ALUMINIUM

Publication

EP 2984710 A1 20160217 (DE)

Application

EP 14714271 A 20140331

Priority

- DE 102013205975 A 20130404
- DE 102013212331 A 20130626
- EP 2014056472 W 20140331

Abstract (en)

[origin: WO2014161823A1] The invention relates to a method for connecting a tubular cable lug (2) made from a nonferrous metal to a strand (11) produced from aluminium, comprising the following steps: providing a tubular cable lug (2) having a tubular portion (3) and a connecting portion (4) extending therefrom; providing an ultrasound welding device having a sonotrode (5) that has a comb-like curved pressure surface (7) and an anvil (1) having a comb-like curved mating pressure surface (10); fixing the connecting portion (4) to the anvil (1) by clamping in such a manner that the tubular portion (3) faces the mating pressure surface (10) of the anvil (1); inserting one end (E) of the strand (11) into the tubular portion (3) of the tubular cable lug (2); bringing the pressure surface (7) into contact with the tubular portion (3); pressing the pressure surface (7) against the tubular portion (3) such that the tubular portion (3) is forced against the mating pressure surface (10); and generating an ultrasound vibration oriented approximately perpendicular to a tube axis (A1) of the tubular portion (3) by means of the sonotrode (5) in such a manner that the tubular portion (3) is deformed and welded, at least in portions, to the aluminium strand (11) inserted therein.

IPC 8 full level

H01R 43/02 (2006.01); **B23K 20/00** (2006.01); **B23K 20/10** (2006.01); **B23K 20/233** (2006.01); **H01R 4/18** (2006.01); **H01R 4/62** (2006.01)

CPC (source: EP US)

B23K 20/002 (2013.01 - US); **B23K 20/10** (2013.01 - EP US); **B23K 20/106** (2013.01 - EP US); **B23K 20/2333** (2013.01 - EP US); **H01R 4/187** (2013.01 - EP US); **H01R 4/625** (2013.01 - EP US); **H01R 43/0207** (2013.01 - EP US); B23K 2101/34 (2018.07 - EP US); B23K 2103/10 (2018.07 - EP US); B23K 2103/12 (2018.07 - EP US); B23K 2103/18 (2018.07 - EP US)

Citation (search report)

See references of WO 2014161823A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

DE 102013212331 A1 20141009; BR 112015025425 A2 20170718; CN 105379017 A 20160302; CN 105379017 B 20180206; EP 2984710 A1 20160217; EP 2984710 B1 20160518; JP 2016517147 A 20160609; JP 6118454 B2 20170419; MX 2015013838 A 20160610; MX 353131 B 20171219; US 2016052081 A1 20160225; US 9855623 B2 20180102; WO 2014161823 A1 20141009

DOCDB simple family (application)

DE 102013212331 A 20130626; BR 112015025425 A 20140331; CN 201480020152 A 20140331; EP 14714271 A 20140331; EP 2014056472 W 20140331; JP 2016505789 A 20140331; MX 2015013838 A 20140331; US 201414781686 A 20140331